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ABSTRACT

Informal notes are presented from conference discussions by 18 newly appointed chairmen, three highly successful resource people who could draw on their own experiences as department heads, and several additional special discussion leaders. Topics of interest to the department chairmen were covered, including the chairman's pivotal role, dealing with people, faculty evaluation, faculty unions, chairman-student relationships, interdepartmental problems, public relations, outside support, and department administration. (LBH)

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Notes on the 1974 Conference for New Science Department Chairmen at Public Institutions

Grand Hotel

Point Clear, Alabama

July 14 - 19, 1974

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HE 00 6660

1974 Conference for

New Science Department Chairmen at

Public Institutions

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INTRODUCTION

To provide firsthand knowledge of investigators and institutions for the evaluation of grants proposals, the Grants staff of Research Corporation visits hundreds of colleges and universities each year. From this close view of academic science, it is continually apparent that department chairmen have a unique influence on the conduct of research and the motivation of students, as well as the total environment in which faculty and students work. Strong departments inevitably have -- or recently have had -- effective chairmen.

Altnough individual styles differ, there are certain characteristics that personify effective chairmen: a genuine concern for blending the interests of faculty and students, the ability to harmonize the department's activities with those of the whole institution, a capability for judicious administration and personal qualities of leadership.

How do chairmen reach this pinnacle? Very often chosen on the basis of measurable achievements as faculty members but only promise as administrators, new chairmen take up their posts with virtually no preparation. Yet the decisions they must make will have crucial consequences. The new chairmen

have to hit the track running, for from the first day they are helping to make or break their departments and influencing, however subtly, the course of their institutions.

To help new chairmen get moving quickly, Research Corporation again in 1974 conducted separate week-long working sessions for heads from private and public institutions. Each conference included eighteen newly-appointed chairmen, three highly successful resource people who could draw on their own experiences as department heads, and several additional special discussion leaders.

The informal notes which follow are those of the conference for publicly supported institutions. The conference was not intended to be all-inclusive, but to provide coverage of those topics which were of current interest to the chairmen. Those who have read the notes of earlier meetings, however, will observe that there are certain recurring problems for which new solutions are still being sought.

Copies of the counterpart notes of the 1974 conference for heads at private institutions are available from Research Corporation, as are copies of the notes of the sessions held annually since 1971.

Although no conferences will be held in 1975, a book based on the seven sponsored to date by the foundation is being prepared as an aid to new chairmen in tackling a job that has been described as "the most frightening, most ill-defined, most challenging of any in academe."

THE CHAIRMAN'S PIVOTAL ROLE

If the department head faces what might be called an identity crisis, it's no wonder. The students see him as the receiver of complaints. The faculty may view him variously as a boss, colleague, as a democratic decision maker, or merely as the representative for the department's needs. Chances are excellent that the upper administration, on the other hand, sees the chairman as a frontline lieutenant, an interpreter of high-level decisions who can manage resources and communicate effectively.

What are the chairman's motives in all this? Does he see himself primarily as an administrator or as a faculty member, and is it important? Roles aside, it is evident that certain elements are needed for success. As a faculty member he is first among equals and must be effective in advancing the academic program. As departmental administrator he must know how decisions are made above the department level (the procedures of local and central administrations and the state itself) and how he can influence the process.

The reaction expressed by one new chairman ("God, the last thing I want to do is get involved in <u>that</u> bureaucratic

maze!") represents a danger. Securing adequate resources for the department, recruiting students, hiring and firing faculty members and resolving other problems can be done only with reference to decision points that range from the dean right up to the state administration.

Recent changes -- declining numbers of students, scarce resources, faculty unions and the increasing tendency of state governments to become concerned with accountability and educational policy -- make communication more vital than ever. Student bodies are changing as young people "take a break" during their college careers and their elders return for refresher courses.

The fluid state of higher education produces anxiety among faculties and administrations, rapidly shifting goals, and a need for far more flexibility than in the past. Innovation, it was suggested, depends on faculty and administration working together, and the department head is pivotal. Chairmen were advised to tell the whole story, to alert their administrations as to both present and future needs and to demand adequate input all the way along the line. "The biggest problem is fear of the unknown," said one conference leader. "Don't make people ask, 'What on earth is happening?'"

Lack of Communication at a Typical Multicampus University

Communication was held to be very much a one-way process at one large state university. Although department chairmen

file extensive reports on goals, plans, and needs, they seldom receive feedback. A provost is located on a central campus, and much administrative paper work is funneled through layer upon layer of chairmen, superchairmen and higher level administrators. Budget figures are handed down without comment.

"I'm asked to report how much time my faculty members take for coffee breaks," said a chairman from the university, "yet I get no reactions, no information, just temporizing."

Here, it was suggested, the care and feeding of the central administration must be done from the grass roots level. The chairman should visit administrators on a routine basis as a reminder that good morale depends on good communication. (A memo on faculty accomplishments to the dean with copies to the president and vice president may have a positive and refreshing effect.) One should let the administration know when something goes right; with some effort it may be possible to make the administration better than it really is.

At a second institution a chairman took the initiative by setting up a monthly meeting for all university vice presidents. Although the administrators were initially reluctant, the sessions now provide a useful inte-change. If at all possible, some such entrée to the president's office should also be found. In a chain of command situation, a leader advised, one should tell those up and down the line what one wishes to discuss with the president or the vice president, but should not let the chain of command prevent the discussion from tak-

ing place.

One science department handles the communication gap by publishing a weekly newspaper which is distributed to faculty members, other department heads, and all administrators including the president and board of trustees. The publication includes news of programs, accomplishments, gripes, and so on. When the administration fails to inform a department of impending developments, the department is in a position to respond that "we certainly informed you!"

While half of the conference participants had talked to their chief administrator during the past year, most are in constant contact with the dean and others. (Deans tend to value department heads who keep in touch, it was suggested, and one should not wait for a crisis.) Some department heads would prefer to emphasize informal channels of communication, and put much time and talent into utilizing them.

Chairmen were advised to be direct and forthright with their administrations. While there was some apprehension that certain university executives might resent such an approach, it was pointed out that there better not be a wall between chairman and administrator if the chairman is really to function as a frontline lieutenant. At a minimum the head must know what's going on and be able to communicate it.

An administrative style characterized by lack of communication, stiffness and a general unwillingness to consider new ideas might yield to department chairmen acting together. "Whether it's an informal social occasion or a no-holds-barred

discussion, it's important to get administrators out of their offices," a conference leader urged. (Chairmen should carefully weigh the negative versus the positive aspects of meetings of the latter sort.)

Bringing It Back to the Faculty

Distrust seems to be generated by distance, and the further removed an administrator is from the department, the greater the problem. The chairman may have to take steps to overcome the "we-they" dichotomy that is inevitably generated, perhaps by inviting administrators to the department, but also by fostering a conciliatory attitude. Thus, when a faculty member asks, "What will the dean think of this," the head may find it desirable to say, "Well, the dean is a reasonable man..."

Given the need to inform faculty members of administrative decisions or pending actions or programs, it is necessary for the chairman to equip himself in every way possible -- by seeking out those responsible when all else fails. People have a right to know how the decisions were made, it was pointed out, when it comes to the allocation of scarce resources, or when personnel policies are undergoing change.

If there is distressing news to relay, some chairmen invite the chancellor or other responsible administrator to a question-and-answer session with the faculty.

Specific Problems

- A request for a projection of fall enrollment, made by one chairman to the administration, fell on deaf ears. "There is no free interchange, no communication," the head stated. "People at my institution are simply used to not knowing."

In such a situation, it was suggested, one might simply pick up the phone and call the registrar. It is possible to develop alternate channels without alienating higher authorities. In another case, a chairman did pump enrollment figures from the registrar, and simply sent them to the dean and asked him why all chairmen weren't receiving the information on a regular basis.

- The value of outside consultants was stressed by one chairman who had the problem of securing a replacement for an obsolete computer. An IBM consultant from 50 miles away was called in for advice. Just his opinion, as revealed in his letter on the limitations of the machine, was enough to convince the administration a replacement was needed.
- A proposal for reorganizing the biology department drew little response at a large state institution. Despite the fact that massive amounts of data were assembled and opinions solicited from biologists all over the country, the administration's only comment was "the National Science Foundation is not running the university, we are."

The chairman had sent a reorganization proposal to all biologists on campus, deans and the president. Discussion

was invited but not forthcoming, perhaps because an adversary relationship had been established between the chairman and the middle administration. Should the chairman have solicited opinions as to whether or not his proposal should be circulated? Could he have developed more support in the "middle?"

A strategy for advancing a point of view should be carefully thought out, it was suggested, because the first reaction to anything that appears to be a frontal attack may be anger or competitive spirit. Too often, a "paralysis of analysis" -- rather than action -- follows.

"Where there are differences of opinion create a dialogue that is minimally threatening," chairmen were urged. "Even though a direct attack of your own may have a certain therapeutic value, you'd be better advised to count ten and either write a letter or make a phone call and ask your administrators for an appointment. Your excuse could be simply that it is 'very hard to cover all this in a memo -- can we sit down and discuss it?'"

- How does one contend with the "wheeler-dealer" who owes his appointment to someone in the state administration? "Such a person may tell you he's advancing your best interests," said one disgruntled chairman, "but somehow he never lets you know exactly how." In a few cases such administrators may be totally incompetent, and may tend to solve problems simply by caving in to political pressure.

Just as the department chairman should praise good administration, he may have to go after incompetence. An invalu-

able safeguard is a formal, ongoing evaluation system that includes administrators from the chairman on up. Although comprehensive programs may be relatively rare, a number of institutions are beginning to do more to measure administrative performance.

Aside from the difficulty in determining if somebody is truly incompetent, the department head might well be wary of making accusations without clear and convincing evidence. Facts and support are needed, it was observed, for without them one will simply lose points in the battle to have a poor administrator removed.

Summary

If there's a moral to be drawn, it was offered by a conference leader who observed that the "we-they" syndrome can only be diminished by involving the administration in departmental affairs. Given a lack of communication, the administration may simply withdraw from tense situations.

It is up to the department chairman to take the initiative.

DEALING WITH PEOPLE

The post of chairman could be abolished if it weren't for human relations, suggested a conference leader. Given teaching instructions (perhaps from the state capitol), space and salaries, one could expect at least some productive labor from the faculty. The chairman's real job is to get more than the sum of the parts from a talented staff and to coordinate its interests with those of students and administration.

"The role requires something between a Captain Bligh and one aspiring to win a popularity contest," observed one chairman. "If the university is the ship and the students are the cargo, you've got to deal with the crew -- the professors -- and without the techniques that led Bligh's crew to mutiny."

The incoming chairman is usually aware that everything he does will be interpreted in light of the history of the department. Generally there is a tradition that tends to govern promotion, remuneration and tenure, and there may be a "mythology" in force regarding teaching and intellectual achievement. Alteration of existing procedures may best be accomplished through a knowledge of their precursors.

The senior members of the department can often provide

useful advice; seeking such counsel -- whether the chairman agrees with it or not -- is also a useful means of promoting understanding. "Rather than calling people to my office, I like to drop into offices or laboratories, outline a problem and just simply listen," said a conference leader.

One might want to borrow administrative techniques, but only as appropriate: what has worked for others may not work for a new chairman. There is no one way to run a department, it was suggested, and a second and a third way will evolve from the first. By and large the chairman will have to adopt those procedures that seem most comfortable.

Individuals

A challenge to the chairman's authority may call for the mediation of a Disraeli or a Benjamin Franklin rather than a John Wayne-style shoot-out, observed an administrator. Called for are a cultivated "nonflappability" and a talent for seeing all sides of a question.

The senior professors of the department, secure in their positions and with nothing to lose, can be a source of trouble. Given an opportunity to express their opinions and emerge with honors intact, they may join the chairman's camp. Recommended was a calm, confident attitude based on a willingness to admit mistakes and to reason logically.

Typically, other dissenters include the man who needs recognition and is not getting it through normal channels;

the person who is just not "with it," doesn't know what the department is doing, and therefore makes a gross mistake that brings down the wrath of the administration; and the individual who doesn't have enough work to keep him busy. It is something of an art to recognize these symptoms and to take remedial measures by giving people the jobs and recognition they need.

"Generally," commented one experienced department head, "I put my staff on a pedestal and assume they are absolutely right until proven wrong. It is, however, a pedestal surrounded by mattresses, not for sleeping, but for those who regularly topple off."

Young and Old

Preparing for the arrival of a newcomer involves not only an announcement and a request that other staff members help, but making sure the new recruit will have space, money to do at least minimal research and enough time to learn the job. Older staff people may be called upon to assume the newcomer's teaching load for the first quarter, to acquiesce in adjustments to equipment budgets and so on.

In some departments, a senior professor can be counted upon to take young people under his wing, with the chairman making only a minimal effort to insure that everything is taken care of in an orderly and efficient way. "I always thank a senior man for helping a youngster," said one chairman.

"I tell him 'it must be a pleasure to see the evolution in this department that you brought about.'"

As a young staff member begins to grow, the department head may be called upon to help him discover new lines of research (or rediscover old) and to point him toward possible granting sources. Committee work -- to the extent desired by the individual -- can follow an increasing ability to function within the university. The ability to teach is typically developed over a longer period of time, based on the staff member's understanding of departmental philosophy and his desire to excel in teaching.

Older professors can present problems somewhat similar to those posed by newcomers and, as one conference participant observed, "young bucks can give you butterflies in the stomach when you're 55." Assuring a senior member of his continuing role in the department may mean providing new jobs for him, and it may be necessary to convince an older man that a return to productivity will be worthwhile in terms of possible salary increases and other recognition.

If research is out of the question, a senior professor should be given other opportunities to contribute by doing extra teaching or by taking on administrative duties for the department. "It calls for tact," said a conference leader. "Rather than pierce the ego, one has to repair and reactivate it."

Communication Is Vital

Communication starts at staff meetings where everyone has a chance to speak his mind (even if this means starting at one side of the table and going all around it). Even though they may be time-consuming, such exchanges smooth the functioning of the department and serve as safety valves to bring hidden grievances into the open.

Contributing to the value of regular meetings are preliminary agendas and other data made available by the chairman. Objectivity can often be served by first discussing an emotionally-charged issue and then taking a vote on it at some later date.

Committees, coffee groups and social occasions provide more informal means of communication which can produce support for existing programs and ideas for new ones. Such gatherings also fulfill a need for members of the department who require some social contact with colleagues.

A normally reticent individual may find that it helps to talk about all subjects -- using as much time as he can spare. One chairman, who had an initial inclination to give part of his job to an assistant, discovered that it would have been a mistake. It was necessary that he do the routine jobs for the sake of communicating with staff members and talking in detail with them about their work. The chairman is well advised to remember his own role as an intermediary in all dealings with faculty and administration: "the administration"

should be interpreted in terms of the people who happen to be administrators.

Specific Problems

How does one go about dealing with faculty members who fail to pull their weight or who do things destructive to the department?

The otherwise competent person who kept the department boiling by spreading rumors was dealt with by one chairman who gave the man an expected promotion but no raise in salary. That action and a three-hour conference immediately thereafter eliminated the hall mongering and put things back on a constructive course. "Essentially we're talking about good departmental citizenship," observed a conference leader. "You've got to corner the offender and make him understand he's harming the department."

Persuading people to do their share may sometimes be a question of finding jobs they would be interested in performing on behalf of the department. Success in such undertakings can lead to renewed enthusiasm in other areas. In any case, the head must take action when a person becomes so negligent that he generates resentment among his colleagues.

The Evolving Chairmanship

"The new head will find it impossible to define his role

in advance," commented an experienced chairman. "I assumed I'd be representing the faculty to the administration, and that I'd be using faculty meetings as a relief valve -- without worrying what people would think. After walking into the coffee room one day and making a joke to the effect that 'student evaluations were going to be required sooner or later,' I realized I had lost the right to be too casual. They took me seriously."

Department faculty members will often implicitly demand that a new head become an administrator and, in any case, the role will undergo evolutionary modifications. Disagreements with individuals must be seen in a new framework, and temper must be carefully controlled. "It's a new job with new responsibilities," a conference leader concluded, "but the prospects are good for those who can relate to individuals. They can usually find a way to relate to the whole."

FACULTY EVALUATION

Constructive evaluation, said experienced chairmen, is based on openness (ground rules are understood), frank discussions with faculty members, and participation of others in the department in carrying out the process. "Aside from the fact I'm required to discuss evaluations with all staff members," said one conference leader, "face-to-face meetings give people an opportunity to unburden their feelings and gain insight into areas where they might improve. What are others in the department doing? I can tell them, destroy rumors before they get started."

Openness extends to published salary lists at some institutions; at other universities -- despite reported cases of union pressure for full information -- such disclosures would represent a departure from tradition. While there is no one way to handle the problem, the consensus was that full disclosure ultimately creates a better climate.

Support for evaluation often comes through an advisory committee which helps the chairman deal with procedures, tenure, promotion and salary. How and when are evaluations to be made? Is it possible to measure teaching performance?

Generally, it was observed, an advisory committee will stand behind the chairman as long as he takes a balanced departmental view.

More general participation in evaluation is typical of some departments in which all are encouraged to gather data. ("When I'm asked if I have assistants evaluating full professors I tell people I have the department evaluating itself," said the chairman of one such department.) In any case, those present at the conference stressed the need to plant a critical attitude. The chairman might set an example by accepting criticism in good grace, even taking pleasure in being proven wrong.

Teaching performance, increasingly emphasized by some administrations, is difficult to measure, conference participants agreed. In most cases the department must create its own standards. While classroom visits are resisted by many chairmen, some do drop in on sessions and invite other staff members to visit their classes in return. Videotape is another observation technique, but its use was urged more as a means of self-improvement than for evaluation.

Lacking more formal evaluative techniques, evidences of creativity and indications of progress in teaching were held to be the only indicators of performance. (Sobering for some faculty members has been the experience of teaching a second course for students who took one of their previous offerings as a prerequisite.) New staff members, it was stressed, must be given time to develop teaching ability, and cannot really

be evaluated until they have "something to evaluate."

Formal Aspects of Evaluation

Aside from helping staff members do a better job, evaluation has become more important with increased emphasis on legalism in hiring, firing, granting tenure, making promotions and salary increases. With affirmative action and the job shortage has come the need to keep orderly records of personnel actions and changes, and to make regular (at least once a year) evaluations of teaching, research, committee and campus contributions.

Some chairmen urge relatively exhaustive statements which include not only internal views on research projects and papers, but indication as to how outsiders regard the work. These chairmen also report all committee duties performed by individual faculty members and services provided on behalf of the university.

While most conference participants agreed the chairman must have accurate and recent personnel information on file and that there must be standards for personnel actions (at a minimum certain standards are mandated by -- not to mention union contracts -- tradition, affirmative action and the Fair Labor Standards Act), opinion differed as to what extent department head and faculty advisors could be held legally responsible for their decisions.

What kind of records should be kept? Can (or should)

the chairman keep confidential records? Should the chairman and advisory committee members sign their recommendations? Who takes responsibility for an unfavorable evaluation? Practices vary widely. Many chairmen insist on signed advisory opinions, and most sign at least some personnel materials (a few have such forms notarized). A minority view is that the department head should avoid such responsibility. Conference attendees differed on who would have to bite the bullet should a personnel action involving discrimination, tenure or promotion come to trial.

Developing An Evaluation Scheme

Faculty discussion of what activities should be evaluated and the relative significance of each preceded development of the evaluation scheme presented here (page 24). Goals of this particular scheme were to find ways to call upon and reward individual areas of excellence, and to maximize pluralism within the department. Additionally, it was hoped that the evaluation would involve all in assessing their own output while assuring them of fair treatment by forcing the chairman to objective conclusions. (Point scores were to vary by a "subjective" 10 percent, but as the result of multiple judgments.)

Staff members were asked to list their activities for the year under such headings as creative scholarship, general institutional affairs and teaching; minor annual adjustments

were made in point values to reflect changing priorities. "The biggest problem," said the conference leader who developed and used the scheme, "was that some people didn't list projects identified as being of value."

Otherwise, faculty reception for the evaluation was good, and performance was sharpened by the fact that younger professors approaching the levels of their seniors were given additional funding.

While such a method of evaluation must be tailored to the needs of the department (the value of pluralism may depend on the size of the department, for example), it was held preferable to most systems imposed by institutional administrations. Important is that any evaluation scheme give the chairman a judgmental framework and provide him with the comparative information needed to show individual faculty members how they can improve.

Salaries

Where salaries are flexible they are a powerful tool for shaping the department; fixed incremental raises, on the other hand, may limit a chairman's efforts to effectively administer his department. Minimum teaching loads imposed by state or local administrations may have a similar effect, it was pointed out. Where flexibility is a realistic goal, the chairman can only try to educate administrators as to its desirability.

Evaluations notwithstanding, a practice recommended by

some is to set a newcomer's salary at a higher-than-beginning level in his first year. Although he may not get a raise for two years, such action creates a favorable first impression and gives the chairman time to make a thorough assessment.

Tenure or Dismissal?

Is there an obligation to keep nontenured, mediocre faculty members? Can the chairman, in good conscience, drop a merely adequate person in favor of someone better? How does he reach a decision on tenure prior to the time it becomes mandatory? Unfortunately, with jobs tight and some faculty committees prone to generous decisions, the chairman may have to serve as hangman. Stressed by many was that tenure must not be promised verbally or on paper.

Careful evaluation each year is doubly necessary for the purpose of identifying those qualified for tenure. "When the question comes up of dismissing those obviously unqualified," said one participant, "remember that failure to act may create far greater problems for the future. Secondarily, it is usually to everyone's advantage to have mistakes corrected as quickly as possible."

Tenured faculty members who perform poorly offer other problems that must somehow be faced. "It is rare to fire such people for dereliction of duty, but there have been some victories," said a conference leader. "The important thing is that the chairman take appropriate action when it is called for."

A REPRESENTATIVE EVALUATION SCHEME

Activity	Point Value
A. Creative Scholarship	
1. Authorship of major monograph or text	10
2. Research publications (per paper):	
in major journal	5
in minor journal	3
3. International symposia papers	4
International 10 minute paper	2
4. National symposium	3
National 10 minute paper	1
5. State academy of science	
symposia	2
10 minute paper	1
6. Grant $÷1,000	(no limit)
B. General Institutional Affairs	
1. University-wide committee work	3
2. College-wide committee work	2
3. Department-wide committee work	1
4. Recruiting of superior students	2
5. Advisorship of school or departmental student groups	1
6. Student counseling	1-3
7. Public relations tapes and papers	2
C. Teaching	
1. Credit hours taught x 1/2	(no limit)
2. Senior research guidance (per senior)	2
3. Graduate research guidance	3
4. Graduate theses completed	4
5. Credit hours of courses revised	2
6. Confidential student evaluations (all courses)	5
7. Commentaries of alumni	3

To every item incorporate a further 10 percent of total as head's assessment

$$\text{Activity Index} = 1(\Sigma A_{1-6}) + 2(B_{1-7}) + 3(C_{1-7})$$

Σ Activity indices = total raise money allotted.

Raises, then, $\cong$ activity index. If A totalled 100, B 400 and C 800 points then $\Sigma(100 + 400 + 800) = 1300$ AI points.

If dean provides \$2,600 in total raises, $\frac{2600}{1300}$ = \$2/point.

A gets \$200

B gets \$800

C gets \$1600

FACULTY UNIONS

With the trend toward unionism gaining strength at institutions of higher education, the subject received extensive attention from conference participants and leaders. Variations abound in the approaches taken by bargaining agents, in individual contracts and in the roles assigned to department chairmen.

- A department head from a large regional university, part of a state system, reported that he was part of the bargaining unit which represented all chairmen. The employment situation was described as "open shop," with the administration cast in the role of employer for collective bargaining purposes. Not subject to negotiation is the work load of individual faculty members which is set by the state administration. The union, it was noted, professes an interest in improving the institution as well as faculty salaries.
- At a second institution which selected the National Education Association over the American Association of University Professors, chairmen are part of the bargaining unit as are associate deans. Another effect has been permanent appointment, equivalent to tenure, for nonacademics. Conceding that

the unit has been run by professionals, a chairman from the university questioned only the extent to which such representatives bargain for the real interests of faculty members.

- Department heads are part of the bargaining unit at one university represented by the American Federation of Teachers. "We actually came close to a strike," said a chairman from the institution, "but two weeks of negotiations resolved the problems."
- A professional association, made up of a group of faculty members, was selected as the agent for negotiations with the state board at another university. The association, which represents all except vice presidents and other high level administrators, has concentrated on salaries and security rather than on work load and other matters considered academic in nature. Although it has tended toward traditional unionism, the group has not found it necessary to hire a professional negotiator.
- In one of the states where collective bargaining has been legitimized by state law, a department chairman reported that the law itself had been instrumental in the decision of members of the university system to select some bargaining representation.
- Half of all conference participants -- while loathe to make a decision in advance -- felt they should be members of the bargaining unit if unions were installed at their institutions. Collegial reasons were emphasized by many.

Pro and Con

Among foremost considerations for proponents of faculty unions are salaries, job security and the resources necessary for effective research and teaching. In a time of shrinking enrollments and economic austerity, it was pointed out, unions may represent the only leverage available to maintain and improve standards at many universities. Most compelling in the minds of some is the possibility that excellent faculty members, lacking a union contract, may not be able to secure a tenured position after years of service.

In response to objections that unionism may have a negative effect on students and the general public, proponents argue there is no evidence to date to indicate that collective bargaining or other union activities have been particularly detrimental. In fact, it was suggested, an enhanced appreciation of the scientist-teacher may result. "Like it or not, faculty unions are the wave of the future," said a conference chairman. "The question is how we can work to evolve a union that will improve the university."

Opponents of collective bargaining view it as a threat to collegial governance involving students, faculty and administration. "The academic scene is fragile and the educational experience depends upon a subtle interplay," a participant noted. "Will our values be altered or lost if we move to a combative management-employee model?" Calling scholarly pursuits "the last bastion of intellectual free enterprise," an-

other union critic pointed out that excellent people resent leveling. "Dedicated people now work 60 or more hours a week," he commented. "Would they do so under a union contract?"

The chairman's role, poorly defined now, may become even more amorphous with the advent of unionism, it was suggested. As part of the bargaining unit, he might become analogous to a shop steward, with direct administration of the department -- including the power to make budgets -- resting with the associate dean.

Adjusting to Change

Unionism can be expected to affect personal relationships and traditional ways of doing things. A union contract, it was suggested, should be negotiated and structured to avoid inflexibility, unnecessary complexities and the setting up of a conflict-prone relationship with the administration.

Inflexibility in salaries may be impossible to avoid. Reported by one chairman from a unionized institution was a case in which a fixed salary structure with incremental increases made it impossible for him to hire a highly qualified specialist. Such situations may be particularly unfortunate in other areas of science which are expensive in both salary and equipment costs. A possible result, it was noted, might be the loss of well-qualified young people.

Changing relationships were attested to by another conference participant who found his formerly close relations

with the board of trustees preempted by professional negotiators.

The power of the strike (against the legislature but actually to put pressure on the public) could be of doubtful value, it was agreed. Cited reasons for avoiding such action included the possibly harmful effects on public opinion, student morale and ongoing research.

With over half of the conference participants representing states where legislatures have passed, or will pass, laws permitting collective bargaining, it was maintained that a faculty vote against a bargaining agent may not be a viable option. "We can't go back," said one chairman. "Flexible contracts that minimize conflict are the best answer." The leveling effect of fixed salaries can be mitigated by including provisions for merit money (a feature of some AAUP contracts).

Stressed by a leader was that academicians must play a constructive role in the evolution of unionism. "Our job is to encourage the best faculty members to take part in a new form of governance," said a chairman. "If you just sit and complain, you'll wind up with mediocre representation."

THE CHAIRMAN AND HIS STUDENTS

"Students make your reputation on campus," said a conference leader. "The larger the number of students you deal with, the more rapidly barriers build up. They are a living resource. Learn their first names and interests and let them confide in you occasionally."

- To help make students feel a part of things, the large physics department at one university holds special training programs for laboratory teaching assistants. "When our TAs, the students' first contacts with the department, realize the youngsters may be frightened and unsure and that a parent-child relationship is a possibility, they begin to change," the physics chairman reported. (The simple psychology book, "I'm OK, You're OK," has proved a useful training aid.)
- The biology department at another institution encourages instructors to brush into laboratory sessions and stop and talk to demonstrate that they are real, not cold and hostile. Another advantage is that the connection between lectures and laboratory work can be gotten across -- to the benefit of students attempting to master a course.
- In order to make nonmajors enrolled in service courses

feel a bit more at home, one chairman makes a point of introducing lecturers. He tells students who the man is, what he's like, what research he's doing and how it fits into science as a whole.

- The problems of commuting students were recognized by one university which organized departmental associations and generously funded them (about $60,000 annually). The associations -- in addition to a number of purely social activities -- devote their resources to instructional activities involving both faculty and students. Additionally, the students themselves have put up money for student-faculty research, sums that were matched by the institution.

The associations and a student council have furnished enthusiastic, goal-oriented students who serve on committees throughout the university. "Measures such as this gave our 'commuter college' enormous vitality," said one of its administrators. "Once you get above the apathy level you can create a great deal of activity."

What steps can the chairman take to give students nurture and encouragement, to make them privy to department plans and to enlist their help? Aside from open-door policies which give students easy access to the chairman and his staff, some departments maintain conference rooms for faculty and students that can be used for study or just for conversation.

A few institutions have experimented with inviting students, on a random basis, to talk to department heads or higher level administrators. (After being summoned to the pres-

ident's office at one large West Coast university, one youngster promptly reported back that "It's P.R. day with the chief!") In a similar vein, students at a number of departments have been assisted in giving small awards, occasionally of the tongue-in-cheek variety, to faculty members they consider outstanding.

The problem for the chairman, it was agreed, is to not only recognize problems before things go wrong, but to tap students for the useful ideas they can provide and enlist their enthusiasm on behalf of the department.

Students and Research

"We're in action-oriented disciplines," said one conference participant, "and scientists are what they do." Research experience is vital to successful education in the sciences, it was agreed, and there are other advantages. Published papers are especially effective in giving students a boost toward advanced work in science.

Is money necessary for such efforts? "No," said one chairman who thought that this myth had been created by National Science Foundation grants programs for student research. While funding is helpful, many departments provide at least some student research experience with little money or none at all. In one case, $50 granted to individual students for small projects was reported to give both a taste of research and the opportunity to write up a paper for classroom presentation.

Suggested by an experienced chairman was that two or more students work on a single project to insure that one will drag the others along. "I also like them to work on something that one or more members of the department know a little about," he volunteered, "because we have a limited amount of time."

Grants for student or student-faculty research do, of course, have a stimulating effect as do programs in which students participate in industrial research. Lacking such opportunities, one university established a stipend of $1,000 for juniors or seniors proposing meritorious research to be conducted with a faculty member.

Recruiting Students

- A college that has had outstanding success in recruiting physics students has been involved for years in every science fair in the area. The chairman of the physics department writes a letter to every promising youngster.
- Lecturers from some departments present special programs for high schools (mentioned in physics were such topics as "black holes" and "a tour of the universe.") One university's biology department offers a dialogue course for both high school students and other interested persons that explores where the discipline is headed.
- A large Midwestern institution offers a summer "Chautauqua" program for the general public. It's conducted in a downtown park and publicized through announcements in the local news-

paper.

- An increasing number of departments are attempting to reach out and help local high school teachers by conducting special programs and making equipment and advice available.

Other key elements in recruiting include personal or computer letters to promising high school students, campus tours and visits and the involvement of area science teachers and interested alumni. Letters to individuals may stress the department's heavy involvement in research, low student-faculty ratio or other attractive aspects of its program and conclude by inviting the student to visit the campus. Some departments invite local high schools to send their top seniors for a program that may include a tour, lectures and a luncheon.

Recruiting of minority and women students for science study is improving according to some chairmen who see shifts from ethnic and social studies into business and science. Remedial preparatory courses are helping overcome weak backgrounds at some institutions.

Disciplinary differences are pronounced: While biology attracts women (they make up 40 percent or more of students in some departments), there are very few female physics students or physicists. One physics department chairman has appointed a young woman faculty member who will attempt to interest high school girls in entering the field.

Adult Education

"Are returning professionals and other adults important to our institutions?" a conference leader asked. "Do we really care about them? Should we care when our young clients are declining in number?"

Generally, most chairmen felt that revitalization and other programs for adults are desirable. "There is, however, a certain element of faculty trauma in this," observed one participant. "They may say, 'Here we are, having a tough time attracting students and now you're going to drive them away?'"

Whether or not such programs help the science department, marketing surveys and other data tend to indicate that self-renewal is the wave of the future. Already in existence at many institutions are off-campus and extension courses, correspondence offerings with film and audio aids and self-study programs with tutorials. Scientists and professionals are returning for revitalization, Air Force personnel can take courses at certain bases, and the "Young at 40" program offered by one university is typical of efforts to interest adults in more education after years of hustling for a living.

"Programs for adults may solve more problems than they create," suggested a conference leader. "The important point is that they're growing and we must be prepared for them."

INTERDEPARTMENTAL PROBLEMS

While what were termed "fun, self-fulfilling interdisciplinary courses" may be past their peak popularity, the science department chairman still finds himself caught between two extremes. Science majors, increasingly concerned about job prospects, demand relatively narrow specialization in chosen disciplines. Nonmajors, on the other hand, continue to ask for socially-relevant offerings that give them a broad understanding of science.

"We need less emphasis on devising interdisciplinary courses," a conference leader suggested, "and more on people. It requires careful thinking to give an understanding of science to nonmajors, and such programs are difficult to put together and keep together. The chairman has to find the kind of people who can do it."

Disenchantment with certain kinds of interdisciplinary training were voiced by a number of conference participants with more radical experiments being viewed the most skeptically. Thus, while one institution has a program by which the student can take his own major without reference to departmental lines, the student is cautioned to evaluate the economic

value of the degree -- will employers see it as meeting a real need? An "awareness college" started by a second university is fading; this as administrators become "aware" that there are no opportunities for its graduates.

An interdepartmental environmental institute at another university drew this comment from the physics chairman: "I told them it was OK with me if they insisted on establishing a degree, but not to ask me to find jobs for the holders. Industry wants disciplinary training and maybe something extra -- physics and meteorology, for example."

Several conference participants expressed the fear that the student is sometimes deceived when superficial courses create the illusion he really knows something. "He should be told that he must have a major and that he can play with his electives," a leader broke in.

Other reservations were expressed. Experimental programs require a deep commitment by students and faculty that is hard to sustain and even harder to reward. (Most institutions are set up to recognize good research, teaching and service within a discipline.) Secondly, administrators currently look askance at costly "new toys," and are spending, it was reported, very little on them. Both factors contribute to a waning interest and people dropping out.

The Argument for Interdisciplinary Efforts

Most conference participants and leaders agreed that,

if radical experiments are bound to fail, there is a need for some diversity, that the training of science majors might be broadened beyond the "traditional disciplinary boxes," and that nonmajors must be given an adequate understanding of science. And, while new programs and degrees may be lacking, much evolution must, in any case, take place within traditional departments -- unheralded by dramatic announcements. "We must keep trying," one leader observed. "It's a question of multiple production, evolution and selection."

The current job market provides no clear guidance: A conference leader present at a number of industry meetings reported "the talk was about things broader than one discipline, perhaps reflecting a time lag between current thinking and actual hiring practices." A possible conclusion? A broad program might be acceptable to industry, but it should be couched in disciplinary terms; environmental science, for example, might actually be environmental physics.

One the plus side is that interdisciplinary programs may attract the students necessary for the survival of the institution, and that some of the best of these courses ultimately bring people into the disciplinary fold. "It's not all sour," said one chairman. "It's just a question of finding the right combination. We've got 30 percent of our people in our physics and oceanography program."

Certain offerings have, indeed, been both timely and well received. A course on "Man's Physical World" at one university has grown at three times the rate of the institution;

a course on "Science for Survival" -- in which the chemistry, biology, physics and history departments cooperate -- has proved popular on another campus. A third university's lecture service course on conceptual physics also draws students. "It's a lot of fun to go into why metal surfaces are shiny, why gold is gold-colored and so on," the responsible chairman stated. "We say if you can't teach it without math and jargon, you don't really understand it."

Other courses have been built around explaining how gadgets work ("It's a mistake to ignore simple things in favor of the most modern, most sensational textbooks," agreed one participant), or exploring science as a part of history, culture, art or music. (Declining history departments might benefit from such cooperation, it was suggested.)

Energy is of current interest, and some universities had broad courses in this area as long as six years ago. The current crisis may add up to a proliferation that begins with "energy and public affairs" and winds up with specialized offerings in chemistry and physics. ("Why," lamented one chairman, "did we sit on our duffs teaching F equals MA and the Carnot cycle?")

A major in nutrition, planned five years ago and extended to the departments of home economics, biology and agriculture at one multicampus university, has also proven timely. "The idea is to get up the sails before the wind blows," the chairman stated. "Usually you're left with a lot of sails, but in this case it was good thinking."

Inspired Teaching Required

Broad survey courses intended to impart general understanding place a very high premium on teaching, and getting the people to do the job was seen as a major stumbling block. "The attitude I find is that when you don't understand something, you start writing formulas," said one chairman. "How do you get someone to put it on a verbal level and then stick with it?"

At the university that offers the conceptual physics course, little effort is needed to interest new instructors. They are invited in, and gradually eased into teaching as a part of a team. So popular is the course that even faculty members with heavy commitments have asked to be assigned, leading to a rule that one can undertake the job only twice -- with a break in between. "This sort of course may be among the last bastions of honest teaching," observed a chairman. "You're on a high for the duration, and you're depressed when it ends."

More reluctance is encountered in other situations, and in any case faculty members must be able to get back to hard disciplinary offerings without too much of a time lapse. Staff members may be inspired to teach, but can isolate themselves from their own fields and colleagues. Secondly, there may be a temptation to use such work as a means to escape departmental problems.

Collaboration On a Practical Level

There is an obvious need for cooperation where disciplines overlap. Thus, programs in geophysics are put together by physics and geology departments; a technical medical program is run by biology; physics and chemistry departments teach a joint course in thermodynamics, and a biophysicist is hired jointly by an institution's physics and biology departments.

Where interdepartmental cooperation is lacking, it may be easier to undertake it in research than in the curricular area. At a minimum, sharing equipment may be vital to the success of all. As one example, optimizing computer usage and programming often becomes a joint pursuit.

Faculty members may initiate cooperative projects: At one institution a chemist who is also a bird watcher teaches a beginning course in ornithology for biology; a physical chemist who is also a ceramicist is often loaned to the art department of another university.

Elements which promote interdepartmental cooperation include a strong advising system for students (one which includes representatives from the two or more disciplines involved); team teaching to help faculty members improve their skills and ability to function with counterparts from other departments, and a sympathetic administration willing to establish a reward system for all participants. A curriculum committee representing all science departments may prove desirable.

Cooperation may also be badly needed in nonscience areas,

notably with schools of education. "The dean says we're going to work with them if it kills us," said one chairman. "We pay the full salary of a biologist and loan him to the school of education." At other universities, many science department staff members are involved in training science teachers. While there may be few professional rewards, such efforts are often overdue. "We must foster the idea within our departments that people doing interdisciplinary work are not really lost souls," a participant observed.

Some words of caution were voiced, both as to logical limits of interdepartmental courses and to the quality of cooperative undertakings. "Biology and chemistry get along well at my university," said a participant. "The only problem is that we're running scared as to our service commitments to other schools. Each one wants a course in biology or chemistry flavored for their own programs. We've already had 'Chemistry for Child Development!'"

Where Does the Administration Stand?

Administrative inertia can be a barrier to cooperative efforts, and the chairman may have to convince people that traditional academic departments can be flexible. "If interdisciplinary programs are going to succeed, someone has to commit resources at a higher level," said one conference leader. "There have to be rewards for students and faculty members. People will look for traditional names first, and then

they'll begin to see that something extra may be called for. It can happen -- if the university's chairmen feel it's the right direction to travel and translate it to the administration."

At other institutions the administration has taken the lead in setting up courses -- and even departments -- that cut across traditional disciplinary lines. At one large midwestern university, there are departments of comparative pathology, laboratory animal medicine and experimental psychology, all without real estate or established budgets. While such loose arrangements, which draw on the resources of established departments, often create headaches for the chairmen concerned, they do have the virtue of giving students more choice in selecting programs and degrees.

"The important thing is whether or not we're doing meaningful things, concluded a conference leader. "Today's students hold diverse interests, and traditional specialties may be too narrow. On the other hand, we take a long time to gear up for a new effort -- so much that a new interdisciplinary program may be out-of-date when it arrives. At best, however, a program responsive to real needs means new interdepartmental majors: more people, more support. All that went out of the department in establishing it returns tenfold."

PUBLIC RELATIONS

"We tend to forget we're scientists and assume everyone thinks as we do," a conference leader observed. "The need for good public relations -- communications -- extends to students, community, local press and state legislature. In the broad sense it is explaining the purposes of the university. For the science department chairman it includes giving laymen an understanding of science and the role of the department and its program."

- Good communication begins with the university press and public relations offices. Stressed was that they should be kept well informed as to new research projects and developments, programs, student achievements and the like. University and external publications can reflect such news only to the extent that a flow of information is maintained.
- University news bureaus are often grateful for assistance in spotting newsworthy subjects and preparing releases or articles for internal publications. Some departments have appointed correspondents (often a journalism student or science major interested in writing) who type rough copy. Pictures are always effective and student or faculty help can often

be drafted in the absence of a university photographer. "We have one overworked man in our press office," said a chairman, "but with our help anyone in the department who is honored is written up."

- Where coordination with the institution's press and public relations offices makes it possible for the department to work directly with the local press, chairmen were urged to find subjects of general interest and encourage reporters to cover them. While a newspaper may not have a qualified science writer, it is often possible to identify a reporter who at least has an interest in a particular area. "People call me and sometimes I call them," said one leader. "I always have several ideas in my desk, ready to go."

Newspaper stories are usually not checked with sources prior to publication, and certain inaccuracies or sensationalism may result. These drawbacks should be balanced against the desirable aspects of press coverage. Although a mistake or an unfavorable article can occasionally be countered, there is always the risk -- if the publication prints a retraction or correction -- of finding the original error prominently restated. (One alternative: simply start over with a fresh idea for an entirely new article.)

Important, university-wide developments, especially those that might be interpreted negatively, are often the subjects of press briefings at institutions conscious of good public relations. "I made a point of briefing the press on student riots," said one high-level administrator. "There was much

less sensationalism -- a more moderate tone in the coverage that resulted."

Community Relations

A growing awareness of the need to interpret college and university activities to the public characterizes most administrations and a growing body of faculty members. Open houses and other programs for the community are being supplemented -- especially at community colleges -- by courses for the general public. Biology, physics, chemistry and more general offerings in the sciences are available at many institutions. Also of a scientific nature are a number of popular and very practical courses (horticulture for example).

In some cases, faculty members are paid extra for teaching the courses and given a mileage allowance if travel is necessary. Staff reception for such projects has ranged from apathetic to enthusiastic. (Given the latter attitude, a few chairmen have had to reduce regular teaching loads or find other ways to prevent outside activities from draining faculty members.)

"Even small community relations projects reap dividends," said one chairman who organized an open house entitled A Day of Science. "What you present may lag actual developments by a year or two, but your credibility goes way up."

Other ways of reaching out into the community include active participation in the university's speakers' bureau,

conducting departmental tours or presenting lecture programs for the general public. While the campus administration typically has the responsibility of maintaining high visibility, it was suggested that the science department can also make itself known given coordination with other university offices.

The State Legislature

Good relations with state legislatures are essential to public institutions, and science department chairmen may be called upon to help present university problems, policies or hopes for the future. The need for coordination is usually intensified, for the president and his administration typically assume responsibility for such liaison.

Efforts reported by chairmen to inform legislators on scientific subjects ranged from "very successful" to "a disaster, we were completely rebuffed." Among those claiming success was one department head who arranged a seminar on nuclear power. Extensive interaction between legislators, members of state regulatory agencies and faculty members helped give all a better idea of the university's programs and potentials.

"Invite politicians to such meetings," a leader suggested, "and make a point of recognizing them if they show up. You'll score points where they count."

OUTSIDE SUPPORT

"Outdated is the tradition that public institutions should leave private donors to private institutions," said a conference leader. "The flow of public money to private institutions has been increasing, which is appropriate. Also appropriate is that some corporate and private support be available to public institutions as tney increase their capabilities and attract highly qualified faculties."

Fund raising requires an institution to develop a profile of itself, make match-ups with corporations and individuals, establish contacts and follow through. A development office is vital in maintaining up-to-date information and for coordination. Worthwhile gifts are often available from local foundations and individuals, and some public universities are receiving funds through wills and bequests, sources private institutions have relied upon for years.

Foundation and corporate fund raising is based upon a knowledge of the donor organization's priorities and what it has funded in the past. Whether or not the president or other university officer helps in tying down larger gifts, there must be strong institutional support for development.

Coordination

Approaches to large corporations, a local business, local foundation or individual (the last three may be under less pressure and more receptive), all demand preparation and coordination. Sad but true is the story of the faculty member who tapped a large corporation for $5,000 -- this just prior to the time when the development officer had hoped to get $50,000 annually.

Aside from compromising professional fund-raising efforts, repeated appeals can create ill will.

Coordination includes communication, and administration, faculty, students and the general public should know the goals of a development program, the sources of funds raised and what will be done with them. While the president will usually outline a major fund-raising program, the department chairman must orient faculty members as to the proper channels for getting things done. "You may be slowed or stymied by the development office," it was observed. "This kind of coordination takes time and effort."

Fund raising remains in an embryonic stage at most public institutions: Only five of those represented at the conference had programs for receiving gifts from individuals.

On the corporate scene, some scholarship programs attract support despite adequate industrial manpower -- this for their public relations value or because they bolster activities important to the company (mass spectroscopy at one university).

A local lumber company, widely attacked as a polluter, gave another institution money for pollution research. (Community and students should be informed as to such donations and what they will be used for, it was urged.)

Grants for Research

The outlook for federal research grants was seen as less than promising. According to one leader, the National Science Foundation (despite increases in funds for energy and some basic research) is funding only about 30 percent of applications. This compares with a level of 42 percent a few years ago. Support from the National Institutes of Health is more limited and subject to intense competition.

Visits to federal granting agencies in Washington are desirable for getting a "feel" for their operations. Faculty members and students may rely on the chairman for tips on grantsmanship. He will usually find it desirable to be able to tell them how to prepare a research proposal free of mumbo jumbo, and how to present and sell it.

A study of such publications as "The Foundation Directory," the publications of the Taft Information Service and the "Annual Register of Grant Support" will reveal much about the interests of national, regional and larger local foundations. Again, clear, straightforward proposals to do significant work stand the best chance of being funded. Personal visits to a foundation may or may not be in order, depending on the prac-

tices of the organization.

Making the Most of Grants

Grants that cover a portion of salaries and overhead may free institutional funds budgeted for these purposes -- "and explain just what flexibility means to your department if your administration isn't aware of it," chairmen were urged. Where the university has long covered all indirect costs, it might be sold on the virtues of doing less on the long term and more on a discretionary basis.

Possible uses of such funds might include the purchase of expensive items of equipment or the making of "mini-grants" for research. At one institution overhead monies go into a pool to furnish grants for all departments. (Although the pool was largely created by the science departments and 80 percent of the grants went to arts and letters, it rebounded to great advantage. The other departments enthusiastically supported a scientific research proposal requiring $500,000 in university matching funds on the basis that "the stronger they are, the stronger we are.")

In some cases indirect cost monies and salaries covered by grants have not been returned. It was suggested that faculty time -- at a minimum -- should be replaced by the university as a matter of ethics. In some cases, university expenditures for salary and overhead can be shown as matching funds needed to secure a grant; in other cases, they serve to insure

the flexibility needed to conduct the research covered by grants.

Contract and Cooperative Research

In many cases, science departments have special skills that can be made available to government or industry, although such action is not without problems. One department, for example, has for many years bid aggressively on projects for the National Institutes of Health and for industry. Others maintain reciprocal research agreements, consulting agreements or conduct water pollution tests and the like.

There are many opportunities: A concern with a new drug, for example, might like the prestige of a university behind it. A science department can do the necessary research cheaper than industry, but should it? Specifically, can the chairman risk using state facilities and supplies in a cooperative arrangement? And, assuming that it is permissible to do the work, how should funds from outside sources be handled?

Such research is vital to many institutions, it was pointed out. The work does pay salaries when the institution cannot, and it does train graduate students and permit the department to buy equipment. In order to resolve the conflicts noted here, some institutions have set up special corporations, consulting boards to evaluate all proposals, or merely special funds through which to handle receipts and disbursements. (Such a fund is also used by one department to handle receipts from the sale of laboratory manuals and equipment to students.)

Outside research conducted by a department or its members calls for some indirect-costs formula to insure that the institution (and hopefully the department) receive a fair return. Cooperative research, a source of discretionary funds for many departments, should be supportive of institutional objectives. In a special category may be arrangements such as that noted by one chairman: A local industrial firm permits students to do research on their premises in exchange for occasional use of department facilities.

Industry grants to individual faculty members (sometimes made with selfish motives) or consulting arrangements with them may call for supervision by the department head. Department and institution should be compensated for time and facilities where warranted.

Surplus Equipment

Surplus equipment from state and federal agencies is another source of support, and certain federal grants can give a science department a high priority in obtaining it. As one example, a physics department managed to acquire $1.7 million worth of surplus metal from an aircraft manufacturer. Smaller amounts of material and various items of equipment are routinely acquired by other science departments and put to good use.

ADMINISTERING THE DEPARTMENT

Is there some magic combination of people, equipment and funding that will lead to a highly productive science department? Probably not, but staffing was held critical in creating a stimulating environment. Achievement may be nonlinear until there are two or three active researchers to create a dialogue; at that point, productivity can soar.

Chairmen of small departments (and especially heads at small colleges which offer a broad curriculum) were urged to seek out people who are capable of teaching in a number of areas and who fit not into just one group, but two or three. Possibilities for creative interchange often exist between institutions in the same area, and regional and national seminars and conferences offer other opportunities. Said one chairman: "I used to dream I was in a fort in a desert -- until I got two staff members who shared some of my interests."

Regrettable though it may be, curtailing certain programs may be beneficial to the department as a whole. "My goal is to set goals," said a participant, "to be able to drop some things and excel in others."

Aside from staffing the department, money for equipment

and supplies has been growing increasingly scarce at many institutions. Reported were equipment budget cuts as large as 50 percent, and statewide freezes on all expenditures. Stressed was the need to do a selling job, not only with the dean and administration, but with state legislators.

The Chairman's Time

Rare is the science department head who works less than 60 hours a week, and even then he succeeds only insofar as he has established priorities, delegated jobs and found an efficient way for the staff to handle the teaching load. Can he still keep appointments and maintain an open door to faculty members and students?

One chairman's coffee breaks have disappeared in favor of conferences with faculty members, while others report that only a sack lunch gives them time to read journals and do miscellaneous chores; a similar menu for dinner gives a few heads productive hours between 5 and 7 P.M. on days when family activities permit.

At least some time free of interruptions is essential, and chairmen fortunate enough to have an inner office often use it to signify they are not available to visitors. Also suggested was that functions be closely delineated as to time and place: one chairman, for example, makes a point of discussing physics -- and only physics -- in the laboratory.

Despite such measures, most new chairmen find they must

curtail certain activities. "The question," said one, "is whether it's going to come out of teaching, administration or research." Although it was agreed that research involvement usually suffers ("I still try," said one head), some work may be possible given a technician or graduate assistants. Reported by an experienced chairman was his intention of requesting such help in lieu of a salary increase.

Delegating Authority

Committees, appointed directors for supplies and services and supersecretaries turned administrative assistants can all help ease the chairman's load. Although there are pitfalls with committees (because of proliferation or because they are used for political or other purposes), some chairmen rely on them. Several conference participants felt a few hard-core committees desirable, especially a committee of committee chairmen. Such a group can be made into an executive council for running the department.

Assignment of specific chores to individuals, perhaps to senior staff members not heavily involved in scholarly pursuits, may be useful as long as care is taken not to divert too much time and attention from teaching.

A good secretary may be made an administrative assistant. One conference leader reported that his assistant had authority to cancel appointments and reschedule them, hire secretaries and sign his name. Attracting and keeping a good person for

such a job may mean intercession with the administration to secure an adequate salary and job classification.

Teaching assignments -- sometimes an administrative headache although they simply seem to fall into place in other departments -- are delegated to a faculty member or members by a few chairmen. With minor adjustments, a good arrangement usually evolves. Some department heads prefer more input (the best man for the course; more time for research for some). Coordination of scheduling between departments is handled through chairmen's meetings at a number of universities. Often a system evolves (the same course at the same hour) which can be repeated year after year.

University and professional association committee assignments are time-consuming and some might better be delegated. "There is a tendency to get overinvolved," said a leader, "when you forget you have very intelligent people working for you." Chairmen were urged to propose faculty members for jobs, relieve them of the duty of reporting everything that happens, and then step back.

Dealing With Support Departments

"If you alienate support personnel they'll get slower and slower," observed one conference leader. "Our department gives them the same recognition as it does professional staff members."

- When something must be fabricated in the machine shop,

one chairman makes a point of taking the machinist to the laboratory to show him what the device is to be used for and how it should work.

- After trying to get timely figures on expenditures from the accounting department, another chairman offered his secretary's services in helping keep books. The arrangement has worked well, and the support people now call her.
- Close cooperation with the purchasing and accounting offices paid handsome dividends for a physics department at a large state university. Office personnel worked long hours to make possible acquisition of surplus industrial equipment and supplies at advantageously low prices -- despite a state law requiring competitive bidding.
- The job of working with support people has been delegated in a few departments to a staff member capable of acting as a buffer between them and other faculty members. ("Where there's a conflict I tell complaining faculty to just stay out of the way and let my director handle the problem," said one chairman.)
- Other suggestions were that departments post pictures of support staff members, hold informal luncheons and briefings for them, and make a point of commending people for jobs well done.
- A favor returned is never amiss. At a university where the industrial arts department does much work for the science departments, science chairmen joined together to secure and pay for surplus materials for the machinists.

The Chairmanship: How Long and What After?

How long should a chairman serve his department? Should he carve out a permanent career as head, return to the faculty or strive for a higher post in the administration? These and other questions were raised during the final session of the 1974 conference for science department chairmen at public institutions.

On the subject of the chairman's longevity, an experienced leader suggested it takes a year to get a good understanding of the job, and that effectiveness increases over three years. An appointment should be made for a minimum of five years, and renewed with faculty approval. "I'd be happy to see a chairman serve for a long time if he is effective," the leader noted, "while giving him opportunities to develop."

Definitely not recommended were short tenures of a year -- a period not long enough for a new chairman to begin to function.

And what of the chairman's aspirations and goals? Among questions asked were whether or not it was true that "one has to move up in four years or be passed over," whether "one has to move because it is felt he would make a good dean."

Although it is dangerous to generalize, the old "up or out" philosophy was debunked by a conference leader who suggested there are highly effective chairmen who would never make good university presidents. From the chairman's point of view, perhaps the best clue is whether or not he continues

to find the job exciting. "If you're riding a high," counseled the leader, "stay on."

Returning to the faculty may also be difficult, it was pointed out. After a long period as department head, one must somehow assume a former role and eschew the temptation to offer advice to the new chairman. "You can do it," said a participant, "but you have to forget how you ran the department and let the new man make his mistakes. My predecessor, chairman for 20 years, has done very well at it -- I have to seek him out."

A return to the faculty after a lengthy period as an administrator was seen as likely to pose even greater problems (although, it was pointed out, most institutions do give such people sabbaticals for review and refreshment). "Perhaps happiness is achieved," commented one chairman, "by simply avoiding the ultimate promotion."

A decision to strive for a higher administrative position usually means giving up research and teaching activities. Will the individual find substitute satisfactions (to quote one administrator) "in making things happen in academe?" Will such compensations be sufficient over the long term? "There are more and more trade-offs as you move up the administrative ladder," said a conference leader. "It's an individual decision in every case, and it's hard."